Utility Management Plan

FY 2019 – FY 2020

Executive Order No. 80 Update

North Carolina Department of Environmental Quality

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EXECUTIVE SUMMARY

The North Carolina Department of Environmental Quality (DEQ) presents this Utility Management Plan in accordance with Article 3B of General Statute 143, "Conservation of Energy, Water, and Other Utilities in Government Facilities," which authorizes DEQ to develop a comprehensive program to manage energy, water and other utility use for state government. Each agency is to develop and implement a management plan including strategies to support stated energy reduction goals, and update plans biennially. This Mar. 1, 2019 plan update was mandated by Governor Cooper's Executive Order No. 80 (EO80), North Carolina's Commitment to Address Climate Change and Transition to a Clean Energy Economy, issued October 29, 2018. EO80 Section 8 requires Cabinet agencies to implement strategies to support a new energy consumption reduction goal of 40% by 2025. This goal surpasses the previous goal to reduce energy consumption in state government buildings 30% by 2015 as measured from a fiscal year (FY) 2002-03 baseline.

In addition to the economic benefits of energy efficiency, there are considerable environmental benefits. Reducing energy consumption translates to a reduction in fossil fuels burned and a decrease in air pollution emitted. Water conservation is also addressed in G.S. 143-355, particularly during drought conditions.

DEQ has experienced a significant change in the number of state-owned buildings in the department but continues to show energy and water use reductions per gross square foot (GSF) of building space. In 2015 the Natural Resources divisions were moved to the Department of Cultural Resources, resulting in a drop of 96% in building space from a high of over 3 million GSF in 2011 to its current 121,000 GSF. Prior to the move, as of June 30, 2015, the Department had achieved a 28% reduction in energy and a 34% reduction in water per GSF. With DEQ's smaller footprint in 2016, in the last three years DEQ reduced its energy per GSF by 15%.

This update presents the utilities report and strategies to achieve continued success in energy and water management for DEQ state-owned facilities at Reedy Creek in Raleigh, primarily housing Air Quality and Water Resources Labs, and the Division of Marine Fisheries in Morehead City. Many DEQ employees work in buildings owned by the Department of Administration, or in leased buildings, which are not included in the utilities scope of this management plan. However, DEQ occupants which are considered tenants in buildings owned or leased by the state can make significant contributions to energy and water savings efforts through awareness and behavior, contributing toward the goals in EO80.

BACKGROUND

Efforts to measure and track energy use and cost in state buildings was highlighted in 2002 with the launch of the state's comprehensive program, the Utility Savings Initiative, pursuant to N.C.G.S. 143-64.10-12. At that time DEQ was known as the Department of Environment and Natural Resources (DENR.) DENR owned a few large buildings and a multitude of small buildings widely distributed across the state and across several divisions, including the NC Zoo, Parks and Recreation, and the NC Aquariums. A robust system for collecting and tracking energy and water usage and cost was developed by the Division of Air Quality in 2008-09. Prior to 2015, DEQ's stock of buildings was significantly reduced from over 3 million sq. ft. to 2.3 million sq. ft. With legislation passed in 2015, the Natural Resources Divisions were transferred to Cultural Resources, leaving about 120,000 GSF in DEQ's ownership.

The state-owned facilities currently managed by DEQ are primarily occupied by the Divisions of Air Quality and Water Resources, located at Reedy Creek in Raleigh, and the Division of Marine Fisheries, located in Morehead City. These buildings are managed by designated "site" energy managers, also serving as Capital Projects Coordinators, who are instrumental in achieving savings through capital improvement and repair projects and maintaining savings in energy and water. These sites report usage and cost annually and update management plans biennially as contributors to this DEQ management plan.

Many DEQ employees work in buildings owned by the Department of Administration or in leased buildings, which are not included in the utilities scope of this management plan. However, DEQ occupants who are tenants in buildings owned or leased by the state can make significant contributions to energy and water savings efforts through awareness and behavior. All DEQ employees can be a part of this statewide effort to save energy and water and address climate change.

Beyond our workplaces, DEQ divisions assist in statewide efforts to manage energy and water in all sectors, with the State Energy Office consisting of the State Energy Program, Weatherization, and the Utility Savings Initiative, as well as the Environmental Assistance and Customer Service Division with the Environmental Stewardship Initiative, Green Travel, and Waste Reduction Partners. The Air and Water Quality divisions are instrumental in oversight of environmental impacts of energy and water use, among others involved in training and communication. The DEQ Sustainability team will continue to enlist support and participation for employee driven efforts. The DEQ is proud to be a leader in promoting best practices statewide in collaboration with other stakeholders to identify opportunities, implement policies and programs and achieve continued success.

UTILITY PERFORMANCE

The following tables present the energy and water data and performance of the current building stock per GSF of building space for the Reedy Creek and Marine Fisheries locations using a baseline year of FY 2015-16. Approximately half of the DEQ space is used for laboratories which typically have a high energy use per square foot of space compared to a typical office. Also provided is the overall DEQ performance from a FY 2003-04 baseline with annual GSF resulting from the reassignment of divisions to the Department of Cultural Resources. Note that some data in the early years were extrapolated to 03-04 from detailed data reports obtained starting in FY 2007-08. Planned improvements in data management may result in revisions to the reported overall DEQ data in the next plan update.

Table 1: Current DEQ Buildings Energy Performance All Fuels by Fiscal Year

Fiscal year	Energy Cost per GSF $/gsf	Cost per million Btu of Energy $/mmbtu	% Change Cost per million Btu of Energy	Energy per GSF Btu/gsf	% Change Energy per GSF
2015-16	$2.72	$15.23	0%	178,658	0%
2016-17	$2.56	$17.73	16%	144,541	-19%
2017-18	$2.49	$16.38	8%	151,839	-15%

Table 2: Current DEQ Buildings Energy Cost & Usage by Fuel Type

Fiscal year	Total Energy $	Total energy million Btu	Electric kwh	Electric $	Nat Gas therms	Nat Gas $	Propane gals	Propane $
2015-16	$330,354	21,689	3,271,820	$271,635	105,001	$57,739	273	$981
2016-17	$311,107	17,547	3,095,920	$251,944	69,154	$56,718	741	$2,445
2017-18	$302,003	18,433	3,040,599	$235,235	80,339	$65,822	265	945

Table 3: Current DEQ Buildings Energy & Water Cost and Indexed by GSF

Fiscal year	Total utility $	Total energy $	Water-sewer $	Total Utility $/GSF	Energy $/GSF	Water $/GSF	GSF
2015-16	$364,345	$330,354	$33,991	$3.00	$2.72	$0.28	121,397
2016-17	$349,296	$311,107	$38,189	$2.88	$2.56	$0.31	121,397
2017-18	$340,273	$302,003	$38,270	$2.80	$2.49	$0.32	121,397

Figure 1: DEQ Utility Cost by Resource Type FY 2017-18

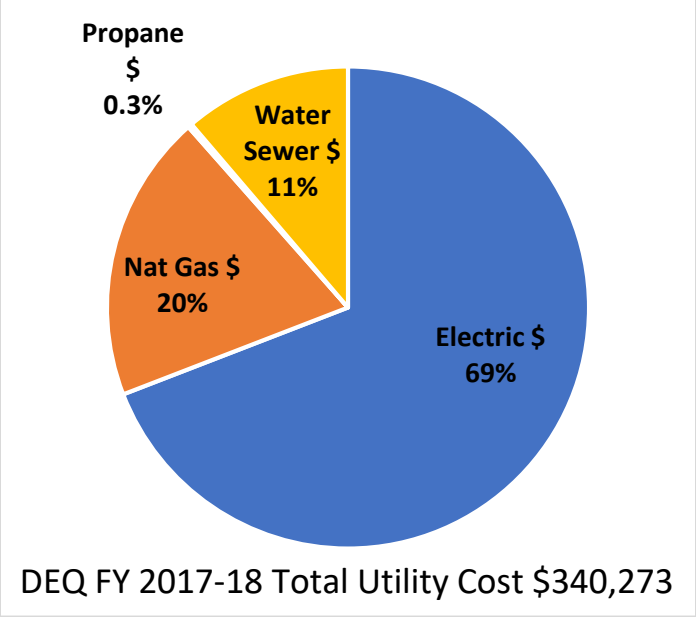

Table 4: DEQ/DENR Overall Energy Performance All Fuels by Fiscal Year

Fiscal Year	Energy Cost per GSF $/gsf	Energy Cost per million Btu $/mmbtu	% Change in Cost per million Btu	Energy per GSF Btu/gsf	% Change in Energy per GSF
2003-04	$1.46	$17.08		85,595	
2004-05	$1.58	$19.71	15%	80,168	-6%
2005-06	$1.49	$21.99	29%	67,921	-21%
2006-07	$1.56	$22.37	31%	69,885	-18%
2007-08	$1.22	$30.88	81%	39,607	-54%
2008-09	$1.53	$23.85	40%	64,144	-25%
2009-10	$1.60	$25.40	49%	62,864	-27%
2010-11	$1.59	$25.70	50%	61,768	-28%
2011-12	$1.49	$23.62	38%	63,018	-26%
2012-13	$1.43	$23.21	36%	61,624	-28%
2013-14	$1.54	$24.00	40%	64,300	-25%
2014-15	$1.50	$21.19	24%	70,653	-28%
2015-16[1]	$2.72	$15.23	0%	178,657	0%
2016-17	$2.56	$17.73	16%	144,539	-19%
2017-18	$2.49	$16.38	8%	151,839	-15%

Consumption data unavailable prior to 2007-08; values were estimated based on extrapolated data.

[1] Baseline for current DEQ building space.

Table 5: DEQ/DENR Water Data Cost and Usage

Fiscal year	Water sewer $	1,000 gal (kgal)	Cost per 1,000 gal $/kgal	% Change $/kgal	gal/sf	% Change gal/sf	Water-sewer $/gsf	gsf
2003-04	$459,230	73,476	$6.25	12%	32.07	-79%	$0.20	2,291,088
2004-05	$504,322	66,032	$7.64	37%	28.09	-81%	$0.21	2,350,872
2005-06	$538,243	67,523	$7.97	43%	25.50	-83%	$0.20	2,648,084
2006-07	$589,827	66,754	$8.84	59%	24.27	-84%	$0.21	2,750,256
2007-08	$630,815	59,418	$10.62	91%	21.13	-86%	$0.22	2,811,818
2008-09	$623,343	59,893	$10.41	87%	20.28	-87%	$0.21	2,953,293
2009-10	$639,371	58,787	$10.88	96%	19.56	-87%	$0.21	3,005,865
2010-11	$659,609	74,517	$8.85	59%	23.93	-84%	$0.21	3,113,955
2011-12	$606,123	59,535	$10.18	83%	23.90	-84%	$0.24	2,490,567
2012-13	$650,365	67,072	$9.70	74%	26.62	-82%	$0.26	2,519,625
2013-14	$635,912	61,355	$10.36	86%	24.30	-84%	$0.25	2,524,706
2014-15	$615,290	56,717	$10.85	95%	24.12	-84%	$0.26	2,351,499
2015-16	$33,991	2,496	$13.62	145%	20.56	-86%	$0.28	121,397
2016-17	$38,189	2,499	$15.28	175%	20.59	-86%	$0.31	121,397
2017-18	$38,270	2,761	$13.86	149%	22.74	-85%	$0.32	121,397

Consumption data was unavailable prior to 2007-08; values were estimated based on extrapolated data.

Table 6: Fuel Cost Comparison

Fiscal year	$/kwh	$/therm	Fuel oil $/gal	Propane $/gal	Electric $/therm	Nat Gas $/therm	Fuel Oil $/therm	Propane $/therm
2003-04	$0.06	$0.00	$1.03	$0.00	$1.77	$0.00	$0.74	$0.00
2004-05	$0.07	$0.00	$1.34	$0.00	$2.05	$0.00	$0.96	$0.00
2005-06	$0.08	$0.00	$1.93	$0.00	$2.24	$0.00	$1.38	$0.00
2006-07	$0.08	$0.00	$1.83	$0.00	$2.28	$0.00	$1.31	$0.00
2007-08	$0.11	$0.00	$3.09	$0.00	$3.15	$0.00	$2.21	$0.00
2008-09	$0.10	$1.34	$2.10	$1.30	$2.91	$1.34	$1.50	$1.42
2009-10	$0.10	$0.61	$3.04	$2.22	$3.08	$0.61	$2.17	$2.41
2010-11	$0.11	$0.89	$3.54	$1.54	$3.17	$0.89	$2.53	$1.67
2011-12	$0.09	$0.77	$3.30	$1.59	$2.71	$0.77	$2.35	$1.73
2012-13	$0.09	$0.76	$3.34	$1.12	$2.70	$0.76	$2.38	$1.22
2013-14	$0.09	$0.84	$3.23	$1.72	$2.66	$0.84	$2.30	$1.87
2014-15	$0.09	$0.76	$2.39	$0.20	$2.77	$0.76	$1.70	$0.22
2015-16	$0.08	$0.55	$0.00	$3.60	$2.43	$0.55	$0.00	$3.91
2016-17	$0.08	$0.82	$0.00	$3.30	$2.39	$0.82	$0.00	$3.59
2017-18	$0.08	$0.82	$0.00	$3.56	$2.27	$0.82	$0.00	$3.87

Table 7: DEQ Utility Cost Details

Fiscal year	Total Utility $	Total Energy $	Electric kwh $	Nat Gas $	Fuel oil $	Propane $	Water-sewer $	Total Utility $/GSF	Total Energy $/GSF	GSF
2003-04	$3,808,442	$3,349,212	$3,263,595	$0	$85,617	$0	$459,230	$1.66	$1.46	2,291,088
2004-05	$4,218,960	$3,714,638	$3,584,051	$0	$130,587	$0	$504,322	$1.79	$1.58	2,350,872
2005-06	$4,493,380	$3,955,137	$3,825,120	$0	$130,017	$0	$538,243	$1.70	$1.49	2,648,084
2006-07	$4,889,289	$4,299,462	$4,191,704	$0	$107,758	$0	$589,827	$1.78	$1.56	2,750,256
2007-08	$4,070,371	$3,439,556	$3,283,914	$0	$155,642	$0	$630,815	$1.45	$1.22	2,811,818
2008-09	$5,140,428	$4,517,085	$3,581,579	$240,968	$148,494	$546,044	$623,343	$1.74	$1.53	2,953,293
2009-10	$5,438,038	$4,798,667	$3,501,283	$165,872	$242,195	$889,317	$639,371	$1.81	$1.60	3,005,865
2010-11	$5,602,805	$4,943,196	$3,626,383	$175,601	$490,931	$650,280	$659,609	$1.80	$1.59	3,113,955
2011-12	$4,314,032	$3,707,908	$2,881,401	$108,769	$310,725	$407,013	$606,123	$1.73	$1.49	2,490,567
2012-13	$4,253,803	$3,603,438	$2,935,289	$55,868	$271,324	$340,956	$650,365	$1.69	$1.43	2,519,625
2013-14	$4,532,610	$3,896,697	$2,993,543	$70,673	$274,660	$557,821	$635,912	$1.80	$1.54	2,524,706
2014-15	$4,136,232	$3,520,943	$3,131,391	$65,443	$258,666	$65,443	$615,290	$1.76	$1.50	2,351,499
2015-16	$364,345	$330,354	$271,635	$57,739	$0	$981	$33,991	$3.00	$2.72	121,397
2016-17	$349,296	$311,107	$251,944	$56,718	$0	$2,445	$38,189	$2.88	$2.56	121,397
2017-18	$340,273	$302,003	$235,235	$65,822	$0	$945	$38,270	$2.80	$2.49	121,397

Consumption data was unavailable prior to 2007-08; values were estimated based on extrapolated data.

DIVISION OF MARINE FISHERIES

The Department of Environmental Quality (DEQ), Division of Marine Fisheries (DMF) consists of five state owned facilities totaling 47,435 square feet located in Carteret County, North Carolina with its main headquarters in Morehead City. DMF shares space with other state agencies at five other locations that are leased facilities throughout the eastern region of the state.

DMF is working closely with DEQ to comply with the overall department Strategic Energy Plan (SEP) which was developed in accordance with the General Statue 143-64.10 -12 "Energy Conservation in Public facilities", which mandates a comprehensive energy management program for state government. This plan supports the State Utilities Savings Initiative (USI), established by the Governor's Efficiency Commission in 2002. The goal of this initiative was to reduce energy consumption by 30 percent by 2015. In 2018 this goal was increased to 40% by 2025 under the Governor's Executive Order No. 80.

DMF is trending in the right direction to accomplish its goals but, much depends on if Repair and Renovation (R&R) funding is received. The replacing of equipment with more efficient types and renovating with energy conservation measures a high priority and educating employees to be more aware of energy savings initiatives is vital to accomplish our goals.

It is desirable to implement campus water conservation measures. To accomplish this goal, professionals will be engaged to observe water usage over a period by recording meter readings, and then use data to establish a baseline of consumption. Inventory existing plumbing fixtures and means of water control, and determine which fixtures might be replaced for improved conservation. Project the gallons of water to be conserved as compared to the current baseline of consumption. Therefore, to achieve this objective documentation has been submitted for funding to implement the selected scope of fixture modernization work.

Conclusion

DMF will continue to strive to meet our goals within our limitations. But, it is imperative that R&R projects be funded to achieve DMF's goals.

NC Division of Marine Fisheries Repair and Renovations Projects

Project completed in 2013-14

1. HVAC Chiller & Replacement
    a. Responsible Party: Anthony Nelson, Maintenance Services Section Chief
        - Funding Amount and Source: $161,000 (R&R)
        - Energy Savings: $9,500.00
        - Project completed: March 2014

Project completed in 2014-15

1. Elevator Modernization
    a. Responsible Party: Anthony Nelson, Maintenance Services Section Chief
        - Funding Amount and Source: $172,000 (R&R)
        - Energy Savings: Unknown
        - Project completed: May 2015

Project completed in 2015-16

1. Fire alarm replacement
    a. Responsible Party: Anthony Nelson, Maintenance Services Section Chief
        - Funding Amount and Source: $163,000 (R&R)
        - Energy Savings: Unknown
        - Project completed: December 2016

Projects completed 2018-19

1. Maintenance Building Roof Replacement
    a. Responsible Party: Anthony Nelson, Maintenance Services Section Chief
        - Funding Amount and Source: $209,000 (R&R)
        - Energy Savings: Unknown
        - Project completion: March 2019

2. Maintenance Building Fire Alarm System Replacement

    a. Responsible Party: Anthony Nelson, Maintenance Services Section Chief

        - Funding Amount and Source: $40,250 (R&R)
        - Energy Savings: Unknown
        - Project completion: April 2018

3. Maintenance Building Restrooms Renovation **(Emergency Project)**

    a. Responsible Party: Anthony Nelson, Maintenance Services Section Chief

        - Funding Amount and Source: $ 115,000 (Special funding)
        - Energy Savings: Unknown
        - Project completion: December 2018

Projects completed 2018-19

1. Renovations of Communications Center and Security System

    a. Responsible Party: Anthony Nelson, Maintenance Services Section Chief

        - Funding Amount and Source: $288,000 (R&R)
        - Energy Savings: Unknown
        - Project estimated completion: October 2018

2. Maintenance Building Restrooms Renovation **(Emergency Project)**

    a. Responsible Party: Anthony Nelson, Maintenance Services Section Chief

        - Funding Amount and Source: $ 202,596 (Special funding)
        - Energy Savings: Unknown
        - Project completion: December 2018

3. Maintenance Building Roof Replacement

    a. Responsible Party: Anthony Nelson, Maintenance Services Section Chief

        - Funding Amount and Source: $209,000 (R&R)
        - Energy Savings: Unknown
        - Project completion: March 2019

4. Maintenance Building Fire Alarm System Replacement

    a. Responsible Party: Anthony Nelson, Maintenance Services Section Chief

        - Funding Amount and Source: $40,250 (R&R)
        - Energy Savings: Unknown
        - Project completion: March 2019

4. HVAC Controls System Upgrade and Standby Generator

    a. Responsible Party: Anthony Nelson, Maintenance Services Section Chief

        - Funding Amount and Source: $417,000 (R&R)
        - Energy Savings: Unknown until twelve months of data
        - Project completion: March 2019

Projects scheduled 2019-20

1. Main Building Complex Roof Replacement

    a. Responsible Party: Anthony Nelson, Maintenance Services Section Chief

        - Funding Amount and Source: $463,000 (R&R)
        - Energy Savings: Unknown
        - Project completion: January 2020

2. Dock Structural Repairs

    a. Responsible Party: Anthony Nelson, Maintenance Services Section Chief

        - Funding Amount and Source: $650,000 (R&R)
        - Energy Savings: Unknown
        - Project completion: December 2020

Plan of Action

DMF submitted 22 projects in its six-year plan for 2015-2021 Reserve for Repairs and Renovations and 40 percent of the projects will have an impact on energy efficiency.
Our efforts show a very positive trend from FY 12 thru FY16 achieving about 17% efficiency even though short of our goal of 30% during this timeframe. But we remain optimistic due to upcoming Repair and Renovation projects identified above and with closer monthly monitoring of utilities' usage we can move closer to achieving the remaining 13% goal.

DIVISIONS OF WATER RESOURCES AND AIR QUALITY AT REEDY CREEK LABORATORY

The Reedy Creek Laboratory Complex brings together the analytical capabilities of the Division of Water Resources and the Division of Air Quality. These capabilities include chemical analysis and biological assessment for determinations of environmental quality.

The complex consists of three buildings constructed in 1991 with approximately 44,000 sq. ft. of laboratory and office space. The structures experienced numerous problems early on with the roofs of all three buildings requiring replacement within the first ten years. Partly due to the nature of the buildings being laboratories numerous other problems developed as the buildings aged. The Chemistry Laboratory was plagued by serious problems with air balance within the building. Energy consumption, particularly natural gas usage, seemed to be high for the size of the buildings. Comfort of the occupants and reliable conditions within the analytical instrument requirements were inferior to what would be expected for a building this age.

A study was done in 2007 to identify the problems and to recommend steps to be taken to remedy the situation. Those recommendations were translated into requests for Repair and Renovation funding and numerous steps have been taken to improve the occupant comfort, the environment for the analytical instruments and the energy conservation measures for the complex.

In 2012, the HVAC system in the Chemistry Laboratory was renovated, a new chiller was installed serving the whole complex and numerous other measures were taken to improve safety, comfort and energy conservation. The result is a building that can be relied upon to better serve staff and save energy. The complex natural gas consumption had been one of the highest in the Department at over 100,000 therms consumed per year. After the renovation, the consumption decreased to consistently below 50,000 therms. This allowed the Divisions to save over $30,000 in natural gas costs per year. While the energy savings is important, it also provided a safer and more productive work environment.

In 2016, the boiler serving the complex was replaced as well as the air handling units in the other two buildings. The HVAC controls were not replaced but are part of an additional project that is about to get underway. The buildings have reliable heat and cooling but the coordination of the controls is lacking and extremely important.

The support from the Department of Environmental Quality in obtaining the necessary funding for these improvements and for the administrative assistance in carrying out the projects has been greatly appreciated.

Lessons learned are the value of maintenance and continual improvement in the buildings systems. The projects done so far have been done incremental partly due to funding and partly due to the need to have continual occupation in the buildings.

The staff at the Reedy Creek complex is committed to, and takes pride in, working with the Department to comply and exceed the energy conservation measures goal set out by the Governor in Executive Order No. 80. We are an environmental agency and committed to reduce the environmental impact of our operations as we carry out the mission of the Department.

NC Division of Water Resources-Reedy Creek Labs Projects

Project completed in 2011-12

1. HVAC Chiller Replacement and Chemistry Lab Renovations
    a. Responsible Party: Section Chief, Chemistry Lab
        - Funding Amount and Source: $1,205,973 (ARRA) $982,000 (R&R)
        - Energy Savings: approximately $35,000-Natural Gas, $22,000-Electricity each year
        - Project completed: May 2012

Project completed in 2017 (some components still under review)

2. Boiler Replacement, Air Handler Replacement in AQ and WQ buildings
    a. Responsible Party: Kent Wiggins
        - Funding Amount and Source: $632,846 (R&R)
        - Energy Savings: approximately $5,000-Natural Gas, $5,000 Electricity each year
        - Project completed: Projected October 2018-some components are still under review, but mostly completed

Projects scheduled to begin in 2019-20

3. HVAC Renovations in Water Quality and Air Quality Labs -DDC Controls for AQ and WQ Lab Buildings
    a. Responsible Party: Kent Wiggins
        - Funding Amount and Source: $265,000 (R&R)
        - Energy Savings – Unknown
        - Project estimated completion: November 2020
4. HVAC Ductwork Renovations in Water Quality and Air Quality Labs-Renovation/Replacement of VAV boxes and ductwork
    a. Responsible Party: Kent Wiggins
        - Funding amount and Source: $496,000 (R&R)
        - Energy Savings: Unknown
        - Project Completion Date: November 2020

5. Cooling Tower Replacement for Complex

    a. Responsible Party: Kent Wiggins

        - Funding amount and Source: $$159,000 (R&R)
        - Energy Savings: Unknown
        - Project Completion Date: November 2020

6. Glycol Energy Recovery Loop Refurbishment in Water Quality Building

    a. Responsible Party: Kent Wiggins

        - Funding amount and Source: $35,000 (R&R)
        - Energy Savings: Unknown
        - Project Completion Date: November 2020

Proposed Energy Projects

7. Laboratory Lighting Improvements Retrofit lighting from T12 to LED

    a. Responsible Party-Kent Wiggins

        - Funding Amount and Source: R&R request
        - Energy Savings: TBD
        - Project estimated completion: Unknown

Plan of Action

The Reedy Creek Lab Complex will continue the efforts already underway to improve the energy efficiency of the buildings in the complex. We will continue to seek new ways to save energy through improvements to the buildings, their operations and their maintenance. The support provided by the Department of Environmental Quality has been and will continue to be critical for the complex to carry out its mission and set an example for environmental stewardship.

Utility Management Plan Strategies

2019-20

Utility Management Plan	
Strategy 1.	Energy Manager to serve as the agency point of contact for energy and water management.
Strategy 2.	Develop and update dynamic plan to reflect EE strategy toward 40% reduction in Btu/gsf.
Strategy 3.	Apply SEO best practices for development of strategies, budget, training, and timelines.
Strategy 4.	Develop internal stakeholders to develop behavioral programs and internal team building toward goals
Strategy 5.	Implement Plan

2019-2020 Planned Activities	Expected Measurement	Assigned To	Occurrence
Meet with SEO to develop ideas for plan	Discuss training schedule available, current Utility Management Plan and future Management Plan	Energy Manager and SEO staff	Quarterly
Research facilities for potential energy savings projects	Create a list to use for potential projects to be implemented in the Utility Management Plan	Energy Manager and Agency Staff	Monthly
Create a Utility Management Plan	Complete timeline and approvals from agency and submit plan to SEO	Energy Manager and staff	Due March 1, 2019, thereafter October 1st each year
Attend SEO or other energy conservation training sessions; attend State Construction and State Energy Conferences	Discuss lessons learned with staff and how that can enhance your strategy	Agency staff	Mar. 28 & May 30, 2019
Develop internal stakeholders and internal teams to implement plan	Designate a person or team to implement portions on the plan	Energy Manager and staff	May, 2019
Develop internal marketing and awards/rewards program	Designate person to develop programming and implement program	Energy Manager and staff	May, 2019
Review Utility Management Plan progress	Tweak plan if it is not realizing expected savings	Energy Manager	Quarterly
Track utility data	Collect annual utility data submit to SEO and trend to catch anomalies. Address discrepancies in data and move of divisions.	Energy Manager	Monthly, September 1st each year

2019-20

Projects to Implement	
Strategy 1.	Review projects with Capital Projects/Site energy managers to determine high priority projects to implement
Strategy 2.	Work with staff to determine available funding to implement projects
Strategy 3.	Create a schedule for projects to be implement during the fiscal year
Strategy 4.	Communicate projects to staff
Strategy 5.	Implement projects

Planned Activities	**Expected Measurement**	**Assigned To**	**Occurrence**
Reedy Creek Labs	Capital Projects List	Site Energy Manager	Ongoing
Marine Fisheries	Capital Projects List	Site Energy Manager	Ongoing
Walk buildings with SEO, including DOA tenants, Sustainability team	Identify opportunities	Energy Manager and Agency Staff	April, 2019
Request audits by Waste Reduction Partners	Audits to identify opportunities	Energy Manager	March-May, 2019
Investigate options for tracking utility data	Determine the best method to track utility data; review billing	Energy Manager	April 2019
Develop priority list of projects for 2020-21	Develop list of projects and start to schedule implementation for next fiscal year	Energy Manager and staff	June 30, 2020

DECLARATION OF SUPPORT FOR
DEPARTMENT OF ENVIRONMENTAL QUALITY
UTILITY MANAGEMENT PLAN

We recognize that:

- Energy and water consumption can be managed to the benefit of our agency.
- Energy and water management is a responsibility of the staff at each facility.

This Agency will implement a Utility Management Plan. Sushma Masemore, State Energy Director, is responsible for the implementation of the Program at this agency.

The attached plan outlines the activities and expenditures required to reduce energy and water consumption to achieve the goals of the program.

The Division staff will review progress and results quarterly and will support staff attendance at training in energy and water management.

Utility Management Plan Mandate- Goals

Agency will reduce annual Total Energy Use Btu per Square Foot by a minimum of 40% by fiscal year 2024-2025 from a baseline fiscal year 2002-2003. We will also continue to track and manage water consumption.

Utility Management Plan Mandate- Measures

Our tracking measures will be the following State Key Performance Indicators (KPI):

- *Total Energy Use Btu per Square Foot*
- *Total Utilities Cost per Square Foot*
- *Total Energy Cost per Square Foot*
- *Total Water Cost per Square Foot*
- *Total Water Use Thousand Gallons per Square Foot*

I have read and will support the Utility Management Plan for my Organization.

Implemented this 1st day of March, 2019

_____ _____

Department Secretary Department Deputy Secretary

_____ _____

Chief Financial Officer Facilities Engineering Manager